AMENDMENTS TO THE CLAIMS

Please cancel claims 2 and 21 without prejudice or disclaimer of the subject matter stated therein. Please amend claims 1, 6, 7, 9-12, 14, 19, 20, and 22 as indicated below. Please add new claims 24-27.

1. (Currently amended) Method for screening for a modulator of calcineurin enzymatic activity, characterized in that a direct interaction between mammalian calcineurin and copper/zinc-superoxide ~~superoxide~~ dismutase is monitored, comprising the following steps

- formation of a complex comprising at least mammalian calcineurin and copper/zinc-superoxide ~~superoxide~~ dismutase in the presence of at least one potential modulator,
- detecting the influence of the potential modulator by directly monitoring the complex formation.

2. (Canceled)

3. (Previously presented) Method according to claim 1, characterized in that formation of the complex is performed in the presence of the potential modulator.

4. (Canceled)

5. (Previously presented) Method according to claim 1, characterized in that the monitoring is performed by detection of labels.

6. (Currently amended) Method according to claim 1, characterized in that the mammalian calcineurin and/or the copper/zinc-superoxide ~~superoxide~~ dismutase carry labels, wherein the labels are enhanced green fluorescent protein.

7. (Currently amended) Method according to claim 6, characterized in that mammalian calcineurin and/or copper/zinc-superoxide ~~superoxide~~ dismutase are expressed as fluorescent proteins.

8. (Previously presented) Method according to claim 1, characterized in that the monitoring of complex formation is performed by laser fluctuation correlation spectroscopy.

9. (Currently amended) Method according to claim 1, characterized in that mammalian calcineurin and copper/zinc-superoxide ~~superoxide~~ dismutase are coexpressed in cells, and that the complex formation is performed within the cell.

10. (Currently amended) Method according to claim 1, characterized in that mammalian calcineurin and/or copper/zinc-superoxide ~~superoxide~~ dismutase are expressed in cells, and that mammalian calcineurin and/or copper/zinc-superoxide ~~superoxide~~ dismutase are isolated and/or purified before the complex formation is performed.

11. (Currently amended) Method according to claim 10, characterized in that purification of mammalian calcineurin is achieved by ferro-nitrilotriacetat(NTA)-metal affinity chromatography.

12. (Currently amended) Method according to claim 10, characterized in that purification of copper/zinc-superoxide ~~superoxide~~ dismutase is achieved by copper/zinc-NTA-metal affinity chromatography.

13. (Previously presented) Method according to claim 1, characterized in that in the complex formation step, calmodulin and/or calcium are present.

14. (Currently amended) Method according to claim 1, characterized in that additionally a monitoring of the enzymatic activity is performed by analyzing the phosphatase activity of

mammalian calcineurin.

15. (Previously presented) Method according to claim 14, characterized in that the phosphatase activity is analyzed by the use of at least one substrate, which preferably carries a label.

16. (Previously presented) Method according to claim 15, characterized in that the substrate is a peptide characterized by the amino acid sequence

Asp - Leu - Asp - Val - Pro - Ile - Pro - Gly - Arg - Phe - Asp - Arg - Arg - Val - Ser - Val - Ala - Ala - Glu.

17. (Previously presented) Method according to claim 15, characterized in that the substrate is a peptide containing a residue labeled with fluorescein.

18. (Previously presented) Method according to claim 3, characterized in that the influence of the potential modulator on the enzymatic activity is detected separately from the influence of the potential modulator on the complex formation.

19. (Currently amended) Method for screening of modulators of mammalian calcineurin activity, comprising:

a) determining the interaction of a potential modulator with either mammalian calcineurin or copper/zinc-superoxide ~~superoxide~~ dismutase as a partner,

b) taking a potential modulator showing interaction with mammalian calcineurin or copper/zinc-superoxide ~~superoxide~~ dismutase according to step a),

c) determining the interaction of said modulator taken in step b), with the other partner, namely mammalian calcineurin or copper/zinc-superoxide ~~superoxide~~ dismutase, respectively, and

d) identifying the potential modulator showing interaction also according to step c).

20. (Currently amended) Method according to claim 19, characterized in that mammalian calcineurin and/or copper/zinc-superoxide ~~superoxide~~ dismutase comprises at least one tag.

21. (Cancelled)

22. (Currently amended) Method according to claim 19, characterized in that mammalian calcineurin and/or copper/zinc-superoxide ~~superoxide~~ dismutase is attached to a solid matrix.

23. (Withdrawn) Kit for screening of modulators of calcineurin activity comprising

- calcineurin and/or a vector encoding for calcineurin and/or cells capable of expressing calcineurin, and

- superoxide dismutase and/or a vector encoding for superoxide dismutase and/or cells capable of expressing superoxide dismutase.

24. (New) Method according to claim 1, characterized in that said mammalian calcineurin is human calcineurin.

25. (New) Method according to claim 24, characterized in that said human calcineurin is a combination of a calcineurin A subunit selected from the group consisting of A-α1, A-α2, A-β1, A-β2, A-γ1, and A-γ2, and calcineurin B.

26. (New) Method according to claim 19, characterized in that said mammalian calcineurin is human calcineurin.

27. (New) Method according to claim 26, characterized in that said human calcineurin is a combination of a calcineurin A subunit selected from the group consisting of A-α1, A-α2, A-β1, A-β2, A-γ1, and A-γ2, and calcineurin B.

INTERVIEW SUMMARY

Applicants would like to take this opportunity to thank the Examiner for the courtesy extended during the interview held on April 13, 2004. In accordance with the discussions held at the interview, Applicants have amended the claims in the expectation that the amendments will place this application in condition for allowance.

During the interview, the inventive subject matter was reviewed in depth, as well as the distinguishing features of the claimed subject matter over the prior art of record. It was agreed that an amendment to include additional structural and/or functional limitation(s) would overcome the enablement rejection. Applicant has made amendments to include additional structural and/or functional limitation(s) herein. In addition, it was agreed that Applicant and the Examiner would further consider whether, and to what extent, the primary cited reference, Wang, et al., teaches a calcineurin/superoxide dismutase complex that is within the scope of the subject matter claimed herein. Applicant has presented additional arguments herein to further distinguish the inventive subject matter from the teaching of Wang, et al.